UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF

JUL 28 1995

HSE-5J

MEMORANDUM

DATE:

SUBJECT: ACTION MEMORANDUM - Request for a Emergency Removal Action at the Autodeposition Site, Chicago, Cook County, Illinois.

FROM: Charles Gebien, On-Scene Coordinator
Emergency and Enforcement Response Section II

TO: William Muno, Acting Director
Waste Management Division

THRU: Richard Karl, Chief
Emergency and Enforcement Response Branch

Site ID # WQ

I. PURPOSE

The purpose of this memorandum is: (1) to confirm the verbal authorization of $50,000 given by Richard Karl on June 28, 1995, to control recent releases of chromic acid and other plating wastes from the Autodeposition site in Chicago, Cook County, Illinois; and (2) to seek your approval to expend an additional $717,000 for a total of $767,000 to conduct an emergency removal action at the site. The site is a former electroplating facility which used chromium, nickel, and cadmium cyanide processes to plate automotive fasteners and machine parts. The removal action seeks to abate the imminent and substantial threat to human health and the environment stemming from cyanide and heavy metal bearing, caustic and corrosive wastes present at the site in drums and open tanks. The proposed removal action seeks to alleviate this threat by removing and disposing of these waste streams. It is estimated that the removal action will require 85 on-site working days to complete. The proposed removal action at the site is considered an emergency removal action due to the direct contact threat to the public from plating wastes within the site and on public property adjacent to the site.

The site is not included on the National Priorities List (NPL).

II. SITE CONDITIONS AND BACKGROUND

CERCLIS ID # ILD005150578

A. Physical Location

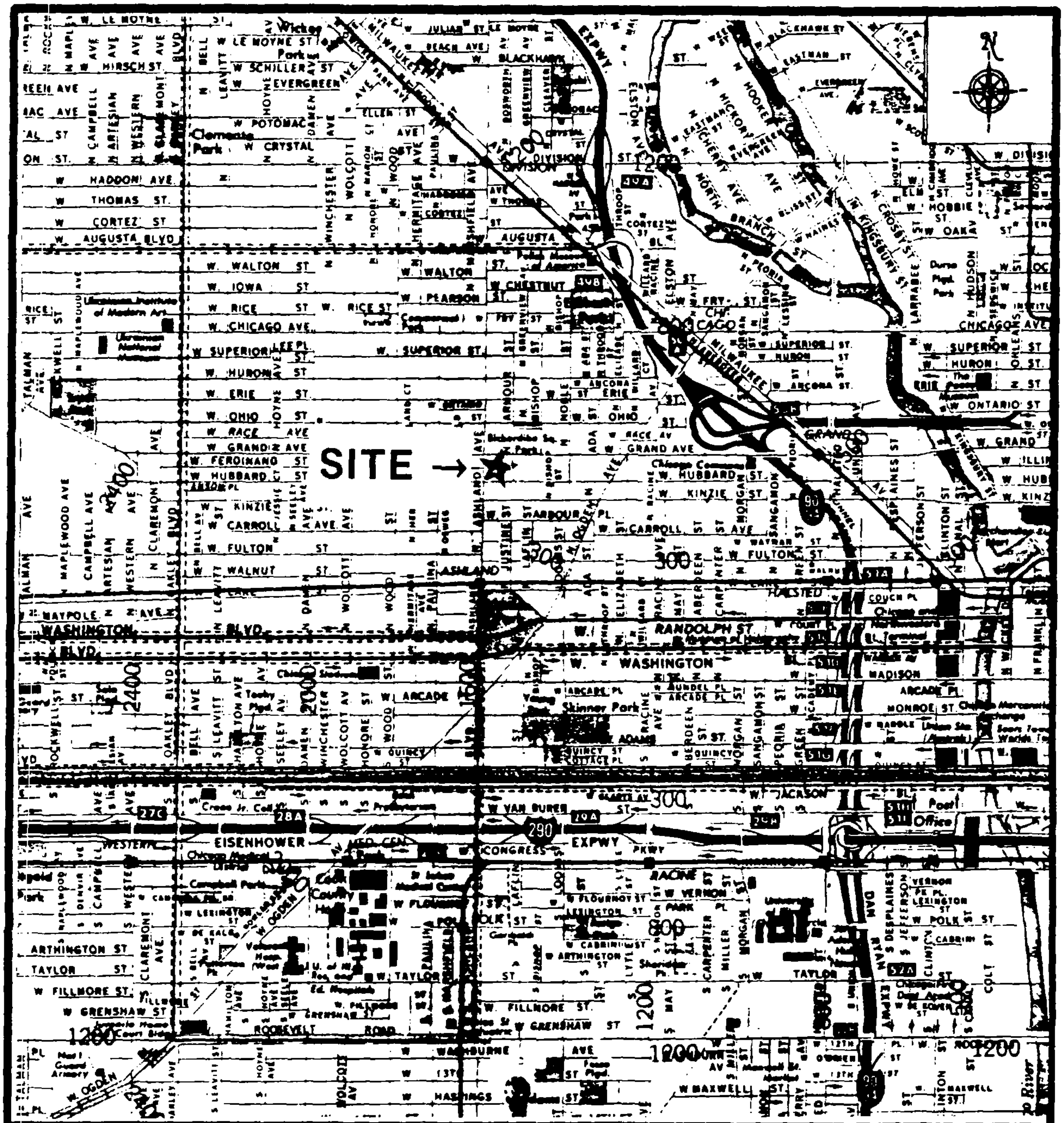
The Autodeposition site is an inactive electroplating facility located at 1518 Hubbard Street in Chicago, Cook County, Illinois (Figure 1). The area around the site is mixed industrial and residential. The site's electroplating apparatus are housed inside a two story building which takes up the entire city block formed by Ashland Avenue, Hubbard Street, Armour Street, and an alley (Figure 2). A small office is located at the south side of the facility. Upstairs, a small area was used as a locker room and storage area for records generated on site. The building is separated into three sections by walls with fire doors.

B. Site Description and Background

Autodeposition Inc. is currently owned by George and Glenn Westerberg. The facility originally started by the Westerberg grandfather in 1923 as Mechanical Plating Company. While in operation, Mechanical Plating had several plating lines (Figure 2). The Westerberg brothers took over the Mechanical Plating Company in 1983, and continued operating under that name until November 19, 1991. In January of 1992, George Westerberg reopened the facility as Autodeposition Inc. Autodeposition Inc. opened with a new "immersion paint process". Approximately one year later, the business involuntarily dissolved and ceased operations. The City of Chicago Department of Environment discovered that the site was abandoned in December of 1994, and contacted the owners to secure the site. In April of 1995, the City noted that the building was not secure. On May 12, 1995, Mr. Joseph Schuessler, City of Chicago Department of Environment (CDOE), Director of Toxic Pollution Control, referred the site to the U.S. EPA Emergency and Enforcement Response Branch (EERB) for consideration for a removal action.

C. Current Site Conditions

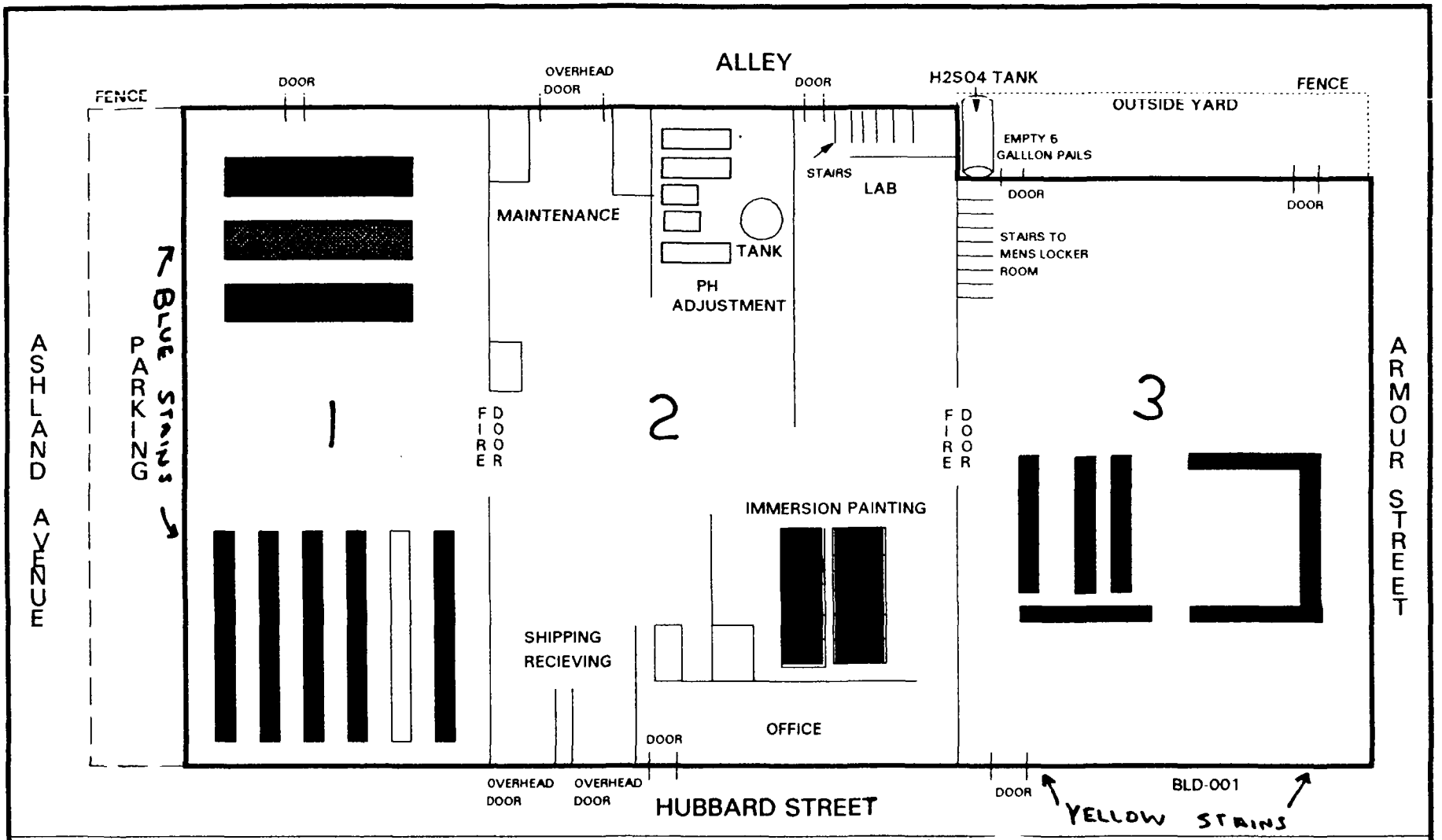
On June 1, 1995, U.S. EPA On-Scene Coordinator (OSC) Charles Gebien, Bill Ryczek, U.S. EPA, Lafayette Robertson, Senior Environmental Inspector, CDOE, Joseph Schuessler, and George and Glenn Westerberg, property owners met at the site to perform the site removal assessment. Mr. George Westerberg unlocked the facility doors and provided information regarding the site. The site assessment team members observed various drums containing alkaline zinc, crystallized copper cyanide and nickel black solutions. Over 100 drums of chromic acid were on site, some of which appeared to be leaking, in addition to over 50 open vats, some of which contained material. The floors of the building were visibly stained. A 2,500 gallon tank containing acid was observed



U.S. EPA

EMERGENCY AND ENFORCEMENT RESPONSE BRANCH

TITLE	Site Location Map	FIGURE #	1
SITE	AUTODEPOSITION INC.	TDD	T05-9505-018
CITY	Chicago STATE Illinois	SCALE	1:24,000
SOURCE	Chicago Map AAA	DATE	1978
		REVISED	1995



LEGEND

- PH ADJUSTMENT VATS
- PAINT IMMERSION VATS
- NICKEL PLATING VAT
- CLEANING VAT
- ZINC VAT
- CHROME PLATING VATS
- COPPER VAT
- CADMIUM VAT

EPA U.S. EPA

TITLE: ORIGIONAL PLATING LINES	FIGURE #: 2
SITE: AUTODEPOSITION INC.	SCALE: NOT TO SCALE
CITY: CHICAGO STATE: IL	TDD: TO5-9505-018
SOURCE: ECOLOGY & ENVIRONMENT, INC.	DATE: 1995

adjacent to the west wall in room 1. A fenced area outside the building in the northeast corner of the site contained one 5,000 gallon capacity tank, which was approximately half full of of sulfuric acid; in addition, several drums were located in the outdoor area.

Air monitoring was conducted during the site assessment with a microtip photoionization detector (PID). The background reading was 1.8 parts per million (ppm). Readings for air monitoring in rooms 1 & 2 were at background. In room 3 readings became elevated from 2.5 ppm (low) to 3.4 ppm (high). Sample D-001 was collected from a 55 gallon drum housed in Room 1 of the Autodeposition site. Sample D-002 was collected from a 55 gallon drum housed in Room 3; Sample D-003 was collected from a 55 gallon drum located in the south end of Room 1. The site assessment team also collected samples from vats within the site. Sample V-002 was collected from one of the paint immersion vats located in Room 2. Sample V-003 was also collected from one of the open paint immersion vats in Room 2. Composite sample AS-02 was collected from the pipe insulation in Room 3. Composite sample FL-001 was collected from solid material scattered on the floor in Room 1. Sample BLD-001 was collected outside the building, from the City sidewalk and the exterior surface of the south wall of the building where yellow stains were observed (Figure 2). A small lab area in room 2 contained the following: hydrochloric acid, sodium hydroxide, buffer solutions, titrating solutions, silver nitrate, and acetone.

Analytical results of grab and composite samples collected from the Autodeposition, Inc. site that exceeded the RCRA characteristics for hazardous waste include the following examples:

Sample D-001

Toxicity characteristic leaching procedure (TCLP) concentrations for chromium were reported at 104,000 milligrams per liter (mg/L), significantly exceeding the limits for characteristically hazardous waste for metals. Total nickel, silver, and zinc were reported at 0.45mg/L, 1.6 mg/L, and 10.8 mg/L respectively.

Sample D-002

TCLP concentrations for chromium were reported at 194,000 mg/L, significantly exceeding the limits for characteristically hazardous waste for metals. See Table 1 for results of Total Metals results.

Sample D-003

The flash point was reported <62° F, exceeding the limits

for characteristically hazardous waste for ignitability.

Sample V-002

Total cyanide was reported at 1.5 mg/L. Total metals for Cr, Ni, and Zn were 19.2 mg/L, 13.8 mg/L, and 12.8 mg/L respectively.

Sample V-003

Acetone was detected at 230 parts per billion (ppb); all other volatile organic compounds (VOC's) were negative for this sample.

Sample AS-02

Sample AS-02 contained 65% chrysotile, the remainder was cellulose and binder, according to polarized light microscopy (PLM)/asbestos analysis.

Sample FL-001

High levels of total cyanide were reported (1200 mg/L). Reactive cyanide was reported non-detect. FL-001 also exhibited characteristically hazardous levels of TCLP for cadmium, copper, nickel and zinc at 58, 5.8, 230, and 240 mg/L respectively. Other metals which were present in elevated levels include chromium, lead, and mercury (Table 1).

Sample BLD-001

The sample, taken from the south side of the building outside Room 3, was reported characteristically hazardous for chromium with a TCLP concentration of 110 mg/L.

TABLE 1
HAZARDOUS WASTES and SUBSTANCES at the AUTODEPOSITION INC. SITE

Location	Analytical Data	Approx. Volume
D-001	Cr TCLP: 104,000 mg/L Ni total: 0.45 mg/L Ag total: 1.6 mg/L Zn total: 10.8 mg/L	3000 Gallons
D-002	Cr TCLP: 194,000 mg/L Cd total: 220 mg/L Cr total: 298,000 mg/L Cu total: 2820 mg/L Pb total: 156 mg/L Ni total: 4720 mg/L Ag total: 2.5 mg/L Zn total: 540 mg/L	5500 Gallons
D-003	flash point <62°F	1000 Gallons
V-002	total cyanide: 1.5 mg/L Cr total: 19.2 mg/L Ni total: 13.8 mg/L Zn total: 12.8 mg/L	6000 Gallons
V-003	total volatiles: 230 ppb acetone	see above
AS-02	PLM/asbestos: Chrysotile 65%, remainder cellulose and binder	unknown
FL-001	total cyanide: 1200 mg/L reactive cyanide: ND Cd TCLP: 58 mg/L Cd total:13900 mg/kg Cr TCLP: .01 Cr total: 730 mg/kg Cu TCLP: 5.8 mg/L Cu total: 9640 mg/L Pb TCLP: 0.11 mg/L Pb total: 1760 mg/L Ni TCLP: 230 mg/L Ni total: 36400 mg/L Zn TCLP: 240 mg/L Hg total: 0.052 ppm	unknown
BLD-001	Cr TCLP: 110 mg/L	unknown

D. State and Local Authorities Role

As described above, the CDOE requested U.S. EPA assistance in conducting removal activities at the site to mitigate any potential threats posed to nearby residents by plating wastes stored at the site. On June 23, 1995, the City of Chicago Fire Department (CFD) and CDOE responded to the continuing release of chromic acid from the site to a City sidewalk. The CFD neutralized the chromic acid on the sidewalk while Mr. Glenn Westerberg hired a boardup service to seal a dock door that had been ripped open by scavengers. On June 26, 1995, CDOE inspectors found that the perimeter fence in the outdoor drum storage area was breached and that vandals had overturned drums of plating wastes, resulting in spillage of wastes onto the ground adjacent to the City alley. On June 28, 1995, Mr. David Inman, Assistant Commissioner, CDOE requested that U.S. EPA initiate immediate actions at the site to mitigate immediate threats to local residents from hazardous wastes at the site. The City of Chicago and the IEPA do not have sufficient funds to conduct the removal action.

III. THREAT TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

Conditions present at the Autodeposition site constitute an imminent and substantial threat to public health and welfare and the environment, based upon considerations as set forth in the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 CFR Section 300.415 (b) (2). Accordingly, a time-critical removal action is the appropriate response action at the Autodeposition site. These conditions include, but are not limited to, the following:

i) Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants;

Access to the site is unrestricted to entry by vagrants and vandals as evidenced by the presence of beer bottles and food containers scattered on the floor. Cyanide, as found in floor composite sample FL-001, may be rapidly fatal if inhaled or ingested. Symptoms of exposure include asphyxia, death, damage to the cardiovascular system, liver, skin, kidneys and central nervous system. Chromic acid is corrosive on contact or inhalation, and may cause severe irritation of the respiratory system. Chronic symptoms of exposure include skin ulcers and conjunctivitis. The presence of chromic acid on the outside of the building and on the sidewalk next to the building poses an immediate threat to the nearby community. Cadmium, found in high concentrations in floor sample FL-001, is known to cause damage to both the liver and kidneys. Cadmium is a suspected carcinogen, and is also linked to hypertension.

ii) Hazardous substances or pollutants or contaminants in

drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release;

U.S. EPA estimates that over 400 55-gallon drums are stored on the site, many of which contain hazardous substances. Many of the 55 gallon drums and plating/immersion/pH adjustment vats found on site are open and full of hazardous material. Several drums are overturned, and many are in poor condition, posing the possibility of release. The 5000 gallon capacity sulfuric acid tank, stored above ground, outside the building, is rusting and if a release should occur, an immediate threat to the population would occur. The pH of a substance on the ground outside the building was determined to be approximately 13. Drums containing plating wastes have been overturned in this outside area and have released their contents to the ground. Rain water will facilitate the overland flow and leaching of hazardous materials exposed to the environment.

iii) Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released;

All utility services at the site have been terminated since Spring 1993. Freezing temperatures during the upcoming winter months may cause rupture of tanks, piping, and containers. The resulting release and mixture of incompatible materials may result in the generation of cyanide gas. Additional spillage to the sumps in the facility's plating area could result in an overflow of hazardous wastes to the sewer and neighboring properties.

iv) Other situations or factors that may pose threats to the public health or welfare;

The site facility is linked directly to a municipal sewer system. High levels of hazardous substances such as cyanide, chromium, and cadmium could be released into the sewer system if a failure in any of the above or below ground containment systems at the site were to occur, or if unauthorized persons were to deliberately dispose of these hazardous substances into the sewer. The site has been abandoned since December 1994, and there is no guard present to prevent illegal entry and tampering with the stored wastes. Scavengers have already stolen most of the facility's office equipment, electrical system, and have overturned plating equipment releasing chromic acid to the floor of room 3. The scavengers broke the water supply for the facilities fire sprinkler system which resulted in the flooding of room 3 and caused a release of chromic acid to the City sidewalk and City alley behind the site.

IV. ENDANGERMENT DETERMINATION

Open tanks and improperly stored drums of hazardous substances *(D002, D006, & D007 hazardous wastes)* at the Autodeposition site contain cadmium, hexavalent chromium, cyanide, and acids at

concentrations significantly higher than those determined by U.S. EPA to pose a threat to human health and the environment. These wastes pose potential inhalation, ingestion, and contact hazards to surrounding residents in this mixed residential/industrial area.

Given the present site conditions, the nature of hazardous substances on-site, and the potential exposure pathways described in section III above, actual or threatened releases of hazardous substances from this site, if not addressed by implementing the response action selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, or welfare, or the environment.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed Action Description

The purpose of this removal action is to mitigate the imminent and substantial threats posed to public health or welfare or the environment from plating wastes at the site. The proposed emergency response action includes the following actions:

1) A site safety plan will be implemented, and the site will be secured by sealing broken doors and windows in the building (This work has been completed).

2) Spillage of chromic acid to the City sidewalk will be removed and drums stored outside of the building will be moved inside of the building (This work has been completed).

3) The contents of vats, drums, tanks, and other containers will be segregated, staged, sampled, and categorized for disposal. Compatible waste streams will be bulked and disposed of off-site. Friable asbestos on exposed piping will be removed and disposed of off-site.

4) All vats will be decontaminated or demolished, as needed, if decontamination is not effective in removing contaminants. Likewise, the floors and floor sump will be emptied and decontaminated.

Waste transportation and disposal will be handled in full compliance with the Agency's off-site policy. Provisions for post-removal site control are not anticipated, as all wastes will be removed from the site and remaining structures will be decontaminated, as needed, to remove hazardous substances.

The response actions described in this memorandum directly address actual or threatened releases of hazardous substances, pollutants, or contaminants at the facility which may pose an imminent and

substantial endangerment to public health and safety, and to the environment. These response actions do not impose a burden on affected property disproportionate to the extent to which that property contributes to the conditions being addressed.

2. Contribution to Remedial Performance

The Autodeposition site is a non-NPL site for which remedial actions have not been planned to date. The proposed removal action will address all threats meeting the NCP Section 300.415 (b) (2) removal criteria as identified in Section III of this Action Memo.

3. Applicable or Relevant and Appropriate Requirements (ARARs)

All Federal ARARs and any Illinois ARARs identified in a timely manner will be complied with to the extent practicable. A letter will be sent to Tom Crause of IEPA requesting that it identify state ARARs.

5. Project Schedule

It is estimated that the removal will be completed in eighty-five (85) 10 hour working days.

B. Estimated Costs

The estimated costs of the recommended action are summarized below. The detailed Emergency Response Cleanup Services (ERCS) contractor costs and initial cost projection scenario are presented in Attachment A. The estimated costs are as follows:

EXTRAMURAL COSTS	
Cleanup Contractor Costs	$425,000.
Contingency (20%)	$ 85,000.
Subtotal	$510,000.
Total TAT (includes multiplier costs)	$ 68,000
Extramural Subtotal	$578,000.
Extramural Contingency (20%)	$116,000.
TOTAL, EXTRAMURAL COSTS	$694,000.
INTRAMURAL COSTS	
U.S. EPA Direct Costs [$30. x (850 Regional hrs. + 85 HQ hrs.)]	$ 28,000.

U.S. EPA Indirect Costs [$53 x 850 Regional hrs.)	$ 45,000.
TOTAL, INTRAMURAL COSTS	$ 73,000.
TOTAL REMOVAL PROJECT CEILING	**$767,000.**

VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

Without undertaking the aforementioned action, freezing temperatures during the upcoming winter months or vandalism may cause rupture of tanks, piping, and containers within the plating building. The resulting release and mixture of incompatible materials may result in the generation of cyanide gas. Additional spillage to the sump in the facility's plating area could result in an overflow of hazardous wastes to the site's outdoor area and neighboring properties. A release of cyanide gas to the air or a release of plating wastes to surrounding properties will contribute and ultimately lead to increased risks to public health and the environment.

VII. OUTSTANDING POLICY ISSUES

There are no outstanding policy issues for the Autodeposition site.

VIII. ENFORCEMENT

For administrative purposes, information concerning the enforcement strategy for this site is contained in an Enforcement Confidential Addendum (see Attachment B).

IX. RECOMMENDATION

This decision document represents the selected removal action for the Autodeposition site, Chicago, Cook County, Illinois, developed in accordance with CERCLA as amended, and is not inconsistent with the NCP. This decision is based on the Administrative Record for the site (see Attachment C). Conditions at the site meet the NCP Section 300.415 (b)(2) criteria for a removal action and I recommend your approval of the proposed removal action. The total project ceiling, if approved, will be $767,000. Of this, an estimated $626,000 may be used for cleanup contractor costs. You may indicate your decision by signing below:

APPROVE: Wm. E Muno DATE: 7/28/85
Acting Director
Waste Management Division

DISAPPROVE: _____ DATE: _____
Acting Director
Waste Management Division

ATTACHMENTS:
A. ERCS CONTRACTOR COSTS
B. ENFORCEMENT CONFIDENTIAL INFORMATION
C. ADMINISTRATIVE RECORD

cc: T. JOHNSON, OS-210
Don Henne, U.S. Department of the Interior
Custom House, Room 3422
200 Chesnut Street
Philadelphia, PA 19106-2904
T. CRAUSE, Illinois EPA, CERCLA COORDINATOR

bcc: A. BAUMANN, HSRL-5J
R. KARL, HSE-5J
J. CISNEROS, HSE-6J
B. MESSENGER, HSE-5J
D. BRUCE, HSE-5J
O. WARNSLEY, HSRLT-5J
T. LESSER, P-19J
L. FABINSKI, ATSDR, HSRL-5J
D. CRUME, MF-10J
EERB Read File (P. Coleman)
EERB Delivery Order File (M. Gustafson)
EERB Site File (SF Central File Room)
R. DUMELLE, Contracting Officer, MC10-J
C. GEBIEN, OSC, HSE-5J
E. FUREY, ORC, CS-29A
B. GURIA, Enforcement Specialist, HSE-5J

ATTACHMENT A

ERCS CONTRACTOR COSTS
Autodeposition Site
Chicago, Illinois

PERSONNEL	$175,000
EQUIPMENT	40,000
MATERIALS	15,000
SUBCONTRACTORS	70,000
TRANSPORTATION	25,000
DISPOSAL	100,000
TOTAL	$425,000

ATTACHMENT B

ENFORCEMENT ADDENDUM

Redacted - not relevant to the selection of the removal action.

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ATTACHMENT C

U.S. ENVIRONMENTAL PROTECTION AGENCY
REMOVAL ACTION

ADMINISTRATIVE RECORD
FOR
AUTODEPOSITION SITE
CHICAGO, ILLINOIS

ORIGINAL
JULY 14, 1995

DATE	AUTHOR	RECIPIENT	TITLE/DESCRIPTION	PAGES
06/28/95	Inman, D., City of Chicago/ Dept. of Environment	Bruce, D., U.S. EPA	Letter re: CDOE Site Referral	2
00/00/00	Ecology and Environment, Inc.	U.S. EPA	Site Assessment/ Removal Action Plan (PENDING)	
00/00/00	U.S. EPA	U.S. EPA	Action Memorandum (PENDING)	